



STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT
601 57TH STREET SE
CHARLESTON, WV 25304-2345

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WATER POLLUTION CONTROL PERMIT

NPDES PERMIT NO.: WV0116408

ISSUE DATE: November 06, 2009

SUBJECT: Industrial Waste

EFFECTIVE DATE : December 06, 2009

EXPIRATION DATE: November 05, 2014

SUPERSEDES:N/A

LOCATION: FAIRMONT

Marion

Monongahela River

(City)

(County)

(Drainage Basin)

See the next page for a list of Outlets.

TO WHOM IT MAY CONCERN:

This is to certify that: AOP CLEARWATER, LLC
168 AFR DR
FAIRMONT, WV 26554

is hereby granted a West Virginia NPDES Water Pollution Control Permit to:

Acquire, construct, install, operate and maintain treatment and disposal systems and best management practices for the direct discharge of treated industrial wastes generated from the recovery of oils, metals, and salt (halite) from natural gas extraction development and production wastewater via Outlet 001 directly to the Monongahela River near mile point 124.7.

To acquire, construct, install, operate and maintain treatment and disposal systems and best management practices for the direct discharge of treated (settling pond) industrial storm water via Outlet 002 to an unnamed tributary of the Monongahela River near mile point 124.7.

This permit is subject to the following terms and conditions :

The information submitted on and with Permit Application Number WV0116408 dated the 31st day of March 2009 and additional information dated the 1st day of June 2009 are all hereby made terms and conditions of this Permit with like effect as if all such permit application information were set forth herein and other conditions set forth in Sections A, B, C, and Appendix A.

The validity of this permit is contingent upon the payment of the applicable annual permit fee, as required by Chapter 22, Article 11, Section 10 of the Code of West Virginia.

Inspectable Unit	Latitude	Longitude	Receiving Stream	Dist. to Stream Mouth (in Mile)	Milepost
001	39°30'24"	80°07'36"	MONONGAHELA RV	N/A	124.7
002	39°30'27"	80°07'28"	Unnamed Tributary Of MONONGAHELA RV	0.4	N/A
101	39°30'24"	80°07'36"	N/A	N/A	N/A
201	39°30'24"	80°07'36"	N/A	N/A	N/A

A.001 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 001 (Storm Water Runoff, Process Water, Other)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>		
		<u>Units</u>	<u>Other Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>	<u>Units</u>	<u>Measurement Frequency</u>
Flow,in Conduit or thru plant (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	0.288 Max. Daily	mgd	Once/Daily Discharge measured
pH (Year Round)	N/A	N/A	6 Inst. Min.	N/A	9 Inst. Max.	S.U.	Once/Daily Discharge Grab
Ammonia Nitrogen (Year Round) (ML-1)	N/A	N/A	N/A	17.7 Avg. Monthly	35.5 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Nitrogen Nitrate (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Nitrogen Nitrite (Year Round) (ML-1)	N/A	N/A	N/A	0.655 Avg. Monthly	1.31 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Nitrogen, Total (as N) (Year Round) (ML-1)	Rpt Only Avg. Monthly	Rpt Only Max. Daily	Lbs/Day	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l Once/Daily Discharge 24 hr Composite
Phosphorus, Total (Year Round) (ML-1)	Rpt Only Avg. Monthly	Rpt Only Max. Daily	Lbs/Day	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l Once/Daily Discharge 24 hr Composite
Cadmium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l Once/Daily Discharge 24 hr Composite
Silver, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.006 Avg. Monthly	0.013 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet 001 - Samples shall be taken at the discharge from the clean water pond after final treatment with the granulated carbon absorption unit.

This discharge shall not cause violation of Title 47, Series 2, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

Page No.: 3 of 24

Permit No.: WV0116408

A.001 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from outlet Number(s) 001 (Storm Water Runoff, Process Water, Other)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Units</u>	<u>Discharge Limitations</u>		<u>Units</u>	<u>Measurement Frequency</u>	<u>Monitoring Requirements</u>	<u>Sample Type</u>
			<u>Other Units</u>	<u>Other Units</u>				
Aluminum, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.782 Avg. Monthly	1.57 Max. Daily	mg/l	Once/Daily Discharge	24 hr Composite
Iron, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	4.61 Avg. Monthly	8.21 Max. Daily	mg/l	Once/Daily Discharge	24 hr Composite
Chloride (as Cl) (Year Round) (ML-1)	N/A	N/A	N/A	912 Avg. Monthly	1771 Max. Daily	mg/l	Once/Daily Discharge	24 hr Composite
Fluoride, Total (Year Round) (ML-1)	N/A	N/A	N/A	6.27 Avg. Monthly	9.15 Max. Daily	mg/l	Once/Daily Discharge	24 hr Composite
Chronic Tox-Ceriodaphnia Dubia (Year Round) (ML-1)	N/A	N/A	N/A	4.1 Avg. Monthly	8.2 Max. Daily	TUc	Once/Daily Discharge	24 hr Composite
Chronic Toxicity - Pimephales (Year Round) (ML-1)	N/A	N/A	N/A	4.1 Avg. Monthly	8.2 Max. Daily	TUc	Once/Daily Discharge	24 hr Composite
Benzene (Year Round) (ML-1)	N/A	N/A	N/A	2.6 Avg. Monthly	3.7 Max. Daily	ug/l	Once/Daily Discharge	Grab
Phthalate Esters (Year Round) (ML-1)	N/A	N/A	N/A	7 Avg. Monthly	13.3 Max. Daily	ug/l	Once/Daily Discharge	24 hr Composite
Selenium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.013 Avg. Monthly	0.026 Max. Daily	mg/l	Once/Daily Discharge	24 hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet 001 - Samples shall be taken at the discharge from the clean water pond after final treatment with the granulated carbon absorption unit.

This discharge shall not cause violation of Title 47, Series 2, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

Page No.: 4 of 24

Permit No.: WV0116408

A.001 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 001 (Storm Water Runoff, Process Water, Other)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Quantity	Discharge Limitations			Units	Monitoring Requirements	Sample Type
		<u>Units</u>	<u>N/A</u>	<u>Other Units</u>			
Arsenic, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.024 Avg. Monthly	0.035 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Barium, Total (as Ba) (Year Round) (ML-1)	N/A	N/A	N/A	4.84 Avg. Monthly	7.06 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Solids, Total Dissolved (TDS) (Year Round) (ML-1)	N/A	N/A	N/A	500 Avg. Monthly	750 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Antimony, Total (as Sb) (Year Round) (ML-1)	N/A	N/A	N/A	0.019 Avg. Monthly	0.028 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Dibromochloromethane (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	ug/l	Once/Daily Discharge Grab
Boron, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	35.8 Avg. Monthly	52.7 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Chloroform (Year Round) (ML-1)	N/A	N/A	N/A	26 Avg. Monthly	37.9 Max. Daily	ug/l	Once/Daily Discharge 24 hr Composite
Sulfate (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	250 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite
Beryllium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.023 Avg. Monthly	0.034 Max. Daily	ug/l	Once/Daily Discharge 24 hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet 001 - Samples shall be taken at the discharge from the clean water pond after final treatment with the granulated carbon absorption unit.

This discharge shall not cause violation of Title 47, Series 2, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

Page No.: 5 of 24

Permit No.: WV0116408

A.001 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:**Final Limitations****Year Round**

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 001 (Storm Water Runoff, Process Water, Other)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Units</u>	<u>Discharge Limitations</u>	<u>Other Units</u>	<u>Units</u>	<u>Monitoring Requirements</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Chromium, Hexavalent Total Rec. (Year Round) (ML-1)	N/A	N/A	N/A	0.02 Avg. Monthly	0.04 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite	Grab
Radiation, Gross Alpha (Year Round) (ML-1)	N/A	N/A	N/A	7.5 Avg. Monthly	15 Max. Daily	pCi/L	Once/Daily Discharge	Grab
Radiation, Gross Beta (Year Round) (ML-1)	N/A	N/A	N/A	498 Avg. Monthly	1000 Max. Daily	pCi/L	Once/Daily Discharge	Grab
Radium 226 and 228, Total (Year Round) (ML-1)	N/A	N/A	N/A	2.5 Avg. Monthly	5 Max. Daily	pCi/L	Once/Daily Discharge	Grab
Strontium, Total (as Sr) (Year Round) (ML-1)	N/A	N/A	N/A	109 Avg. Monthly	159 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite	Grab
Strontium 90, Total (Year Round) (ML-1)	N/A	N/A	N/A	5 Avg. Monthly	10 Max. Daily	pCi/L	Once/Daily Discharge	Grab
Lithium, Total (as Li) (Year Round) (ML-1)	N/A	N/A	N/A	0.355 Avg. Monthly	0.518 Max. Daily	mg/l	Once/Daily Discharge 24 hr Composite	Grab
Total Nitrated Hydrocarbons (Year Round) (ML-1) See Condition C.29	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	ug/l	Once/Daily Discharge	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet 001 - Samples shall be taken at the discharge from the clean water pond after final treatment with the granulated carbon absorption unit.

This discharge shall not cause violation of Title 47, Series 2, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

A.002 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 002 (Storm Water Runoff)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	Discharge Limitations			<u>Units</u>	<u>Measurement Frequency</u>	<u>Monitoring Requirements</u>	<u>Sample Type</u>
		<u>Units</u>	<u>N/A</u>	<u>Other Units</u>				
Flow,in Conduit or thru plant (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mgd	1/quarter	Estimated	Grab
BOD, 5-Day 20 Deg.C (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab
Total Suspended Solids (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab
pH (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Inst. Min.	S.U.	1/quarter	Grab	Grab
Ammonia Nitrogen (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab
Copper, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab
Zinc, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab
Aluminum, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab
Chloride (as Cl) (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	1/quarter	Grab	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Outlet 002 - At the discharge from the stormwater retention pond.

This discharge shall not cause violation of Title 41, Series 2, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

Page No.: 7 of 24

Permit No.: WV0116408

A.002 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:**Final Limitations****Year Round**

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 002 (Storm Water Runoff)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Units</u>	<u>Discharge Limitations</u>	<u>Other Units</u>	<u>Measurement Frequency</u>	<u>Monitoring Requirements</u>	<u>Sample Type</u>	
Benzene (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	ug/l	1/quarter	Grab
Phthalate Esters (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	ug/l	1/quarter	Grab
Selenium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/quarter	Grab
Barium, Total (as Ba) (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/quarter	Grab
Iron, Total (as Fe) (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/quarter	Grab
Chem. Oxygen Demand (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/quarter	Grab
Oil and Grease, Hexane EXTR. (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/quarter	Grab
Total Dissolved Solids (TDS) (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l	1/quarter	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
 Outlet 002 - At the discharge from the stormwater retention pond.

This discharge shall not cause violation of Title 47, Series 2, Section 3, of the West Virginia Legislative Rules issued pursuant to Chapter 22B, Article 3.

Page No.: 8 of 24
 Permit No.: WV0116408

A.101 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from outlet Number(s) 101 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Quantity	Discharge Limitations		Monitoring Requirements	Measurement Frequency	Sample Type
		<u>Units</u>	<u>Other Units</u>			
Flow,in Conduit or thru plant (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mgd	measured
Total Suspended Solids (Year Round) (ML-1)	N/A	N/A	N/A	11.3 Avg. Monthly	29.6 Max. Daily	2/month
pH (Year Round) (ML-1)	N/A	N/A	6 Inst. Min.	N/A	9 Inst. Max.	2/month
Copper, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.216 Avg. Monthly	0.5 Max. Daily	2/month
Lead, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.16 Avg. Monthly	0.35 Max. Daily	2/month
Zinc, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.252 Avg. Monthly	0.657 Max. Daily	2/month
Cadmium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.0102 Avg. Monthly	0.0172 Max. Daily	2/month
Mercury, Total (as Hg) (Year Round) (ML-1)	N/A	N/A	N/A	0.246 Avg. Monthly	0.641 Max. Daily	2/month
Nickel, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.309 Avg. Monthly	0.794 Max. Daily	2/month
						8 hr comp
						Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 101 - Samples shall be taken at the discharge from the granular activated carbon treatment columns prior to entering the raw water impoundment.

A.101 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from outlet Number(s) 101 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Discharge Limitations</u>		<u>Units</u>	<u>Measurement Frequency</u>	<u>Monitoring Requirements</u>	<u>Sample Type</u>
		<u>Units</u>	<u>Other Units</u>				
Silver, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.0122 Avg. Monthly	0.0318 Max. Daily	mg/l	2/month
Fluoranthene (Year Round) (ML-1)	N/A	N/A	N/A	26.8 Avg. Monthly	53.7 Max. Daily	ug/l	2/month
Selenium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.0698 Avg. Monthly	0.176 Max. Daily	mg/l	2/month
Arsenic, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.0199 Avg. Monthly	0.0933 Max. Daily	mg/l	2/month
Antimony, Total (as Sb) (Year Round) (ML-1)	N/A	N/A	N/A	0.0312 Avg. Monthly	0.111 Max. Daily	mg/l	2/month
Cyanide, Total (Year Round) (ML-1)	N/A	N/A	N/A	178 Avg. Monthly	500 Max. Daily	mg/l	2/month
BIS(2-Ethylhexyl) Phthalate (Year Round) (ML-1)	N/A	N/A	N/A	101 Avg. Monthly	205 Max. Daily	ug/l	2/month
Tin, Total (Year Round) (ML-1)	N/A	N/A	N/A	0.0367 Avg. Monthly	0.0955 Max. Daily	mg/l	2/month
Chromium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.0522 Avg. Monthly	0.167 Max. Daily	mg/l	2/month

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 101 - Samples shall be taken at the discharge from the granular activated carbon treatment columns prior to entering the raw water impoundment.

A.101 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 101 (Storm Water Runoff, Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Units</u>	<u>Discharge Limitations</u>		<u>Units</u>	<u>Measurement Frequency</u>	<u>Monitoring Requirements</u>	<u>Sample Type</u>
			<u>Other Units</u>	<u>Other Units</u>				
Vanadium, Total (as V) (Year Round) (ML-1)	N/A	N/A	N/A	0.0518 Avg. Monthly	0.0628 Max. Daily	mg/l	2/month	8 hr comp
Oil and Grease, Hexane EXTR. (Year Round) (ML-1)	N/A	N/A	N/A	38	127	mg/l	2/month	Grab
Titanium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	0.00612 Avg. Monthly	0.0159 Max. Daily	mg/l	2/month	8 hr comp
Carbazole (Year Round) (ML-1)	N/A	N/A	N/A	276	598	ug/l	2/month	8 hr comp
Cobalt, Total (as Co) (Year Round) (ML-1)	N/A	N/A	N/A	0.0703 Avg. Monthly	0.182 Max. Daily	mg/l	2/month	8 hr comp
Butyl Benzyl Phthalate (Year Round) (ML-1)	N/A	N/A	N/A	88.7 Avg. Monthly	188 Max. Daily	ug/l	2/month	8 hr comp
N-Decane (Year Round) (ML-1)	N/A	N/A	N/A	437 Avg. Monthly	948 Max. Daily	ug/l	2/month	8 hr comp
N-Octadecane (Year Round) (ML-1)	N/A	N/A	N/A	302 Avg. Monthly	589 Max. Daily	ug/l	2/month	8 hr comp

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 101 - Samples shall be taken at the discharge from the granular activated carbon treatment columns prior to entering the raw water impoundment.

A.201 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from outlet Number(s) 201 (Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>	
Ammonia Nitrogen (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Nitrogen Nitrate (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Max. Daily	mg/l	Comp
Nitrogen Nitrite (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Cadmium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Silver, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Aluminum, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Iron, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Chloride (as Cl) (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp
Fluoride, Total (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	Comp

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 201 - Raw wastewater from natural gas well fields. Samples shall be collected from the truck discharge (or equivalent location at the headworks of the treatment system).

A.201 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from outlet Number(s) 201 (Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Discharge Limitations</u>			<u>Units</u>	<u>Measurement Frequency</u>	<u>Monitoring Requirements</u>	<u>Sample Type</u>
		<u>Other Units</u>	<u>Rpt Only</u>	<u>Max. Daily</u>				
Benzene (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	ug/l	2/month	Grab	Grab
Phthalate Esters (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	ug/l	2/month	Grab	Grab
Selenium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	2/month	Comp	Comp
Arsenic, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	2/month	Comp	Comp
Antimony, Total (as Sb) (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	2/month	Comp	Comp
Dibromochloromethane (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	ug/l	2/month	Grab	Grab
Boron, Total Recoverable (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	2/month	Comp	Comp
Chloroform (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	ug/l	2/month	Grab	Grab
Sulfate (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	mg/l	2/month	Comp	Comp

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 201 - Raw wastewater from natural gas well fields. Samples shall be collected from the truck discharge (or equivalent location at the headworks of the treatment system).

A.201 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:

Final Limitations

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from Outlet Number(s) 201 (Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Quantity</u>	<u>Discharge Limitations</u>	<u>Monitoring Requirements</u>
		<u>Units</u>	<u>Measurement Frequency</u>
		<u>Other Units</u>	<u>Sample Type</u>
Beryllium, Total Recoverable (Year Round) (ML-1)	N/A	N/A	Rpt Only Max. Daily mg/l 2/month Comp
Chromium, Hex. Diss. (Year Round) (ML-1)	N/A	N/A	Rpt Only Max. Daily mg/l 2/month Comp
Total Dissolved Solids (TDS) (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly mg/l 2/month Comp
Radiation, Gross Alpha (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly pCi/L 2/month Grab
Radiation, Gross Beta (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly pCi/L 2/month Grab
Radium 226 and 228, Total (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly pCi/L 2/month Grab
Strontrium, Total (as Sr) (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly mg/l 2/month Comp
Strontrium 90, Total (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly pCi/L 2/month Grab
Lithium, Total (as Li) (Year Round) (ML-1)	N/A	N/A	Rpt Only Avg. Monthly mg/l 2/month Comp

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 201 - Raw wastewater from natural gas well fields. Samples shall be collected from the truck discharge (or equivalent location at the headworks of the treatment system).

A.201 DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS:**Final Limitations**

Year Round

During the period beginning December 6, 2009 and lasting through midnight November 5, 2014 the permittee is authorized to discharge from outlet number(s) 201 (Process Water)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>		
	<u>Quantity</u>	<u>Units</u>	<u>Other Units</u>	<u>Measurement Frequency</u>	<u>Units</u>	<u>Sample Type</u>
Total Nitrated Hydrocarbons (Year Round) (ML-1)	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	mg/l Comp

See Section C.29

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
Internal Outlet 201 - Raw wastewater from natural gas well fields. Samples shall be collected from the truck discharge (or equivalent location at the headworks of the treatment system).

B. SCHEDULE OF COMPLIANCE

- 1. The permittee shall achieve compliance with the provisions for waste treatment and the monitoring requirements specified in the permit in accordance with the following schedule :**

Effective date of permit.

- 2. Reports of compliance or non-compliance with, and progress reports on interim and final requirements contained in the above compliance schedule, if any, shall be postmarked no later than 14 days following each schedule date.**

Section C - Other Requirements

01. The permittee shall practice good housekeeping including maintaining the facility grounds. There shall be no scattered parts, equipment, debris, etc. Any and all drums shall be either stored in a covered area or kept upon pallets and properly sealed. Any and all tires shall be stored in a covered area or kept upon pallets and properly covered.
02. The permittee may discharge process wastewater from Centralized Waste Treatment through Outlet 001, in which oily and metal materials have been recovered for resale or proper disposal, that is comingled with process wastewater from the manufacture of the product distilled water and the byproduct sodium chloride. Authorization to discharge is contingent upon compliance with the Centralized Waste Treatment effluent limitation guidelines in the Code of Federal Regulations (40 CFR 437 Subparts A and B) in Section A.101 and water quality based effluent limitations in Section A.001.
03. The issuance of this permit shall not relieve the permittee of the obligation to comply with any other federal, state or local laws. Compliance with this permit does not relieve the permittee from the obligation of Section 311 of the Clean Water Act. This permit does not authorize spills of hazardous substances/wastes from any permitted outlet into waters of the State. Such incidents are to be reported in accordance with Sections IV.1 and IV.2 of Appendix A of this permit.

Specifically, the permittee must evaluate if the wastewater being collected at the treatment facility is a hazardous waste (for instance a characteristic waste under 40 CFR 261.24). If the wastewater is a hazardous waste, the permittee must evaluate whether it qualifies as a permit by rule facility under 40 CFR 270.60(c) and meet notification, manifest, and reporting requirements including any more stringent state hazardous waste requirements.

04. The permittee shall notify the Division of Water and Waste Management immediately when it becomes aware of any migration of any pollutant from any unpermitted source (such as contaminated groundwater and/or storm water) into surface waters of the State.
05. Upon review of information submitted under terms and conditions of this permit, the permit may be modified to require additional effluent limitations/monitoring requirements and/or improved best management practices.
06. The permittee shall submit monthly (1/month) according to the enclosed format, a Discharge Monitoring Report (DMR) indicating in terms of concentration and/or quantities the values of the constituents listed in Section A analytically determined to be in the plant effluent(s). Additional information pertaining to effluent monitoring and reporting can be found in Section III of Appendix A.
07. The required DMRs should be received no later than 20 days following the end of the reporting period and be addressed to:

Director
Division of Water and Waste Management
601 57th Street, SE
Charleston, West Virginia 25304
Attn: Permitting Branch

08. The permittee shall not use alternate DMRs without prior approval from this Agency.
09. Any "not detected (ND)" results by the permittee must be "ND" at the method detection limit (MDL) for the test method used for that parameter and must be reported as less than the MDL used. The permittee may not report the result as zero, "ND", or report the result as less than a minimum level (ML), reporting limit (RL), or practical quantitation limit (PQL).

When averaging values of analytical results for DMR reporting purposes for monthly averages, the permittee should use actual analytical results when these results are greater than or equal to the MDL and should use zero (0) when these results are less than the MDL. If all analytical results are non-detect at the MDL (<MDL), then the permittee should use the actual MDL in the calculation for averaging and report the result as less than the average calculation.

Section C - Other Requirements

10. In incidences where a specific test method is not defined, the permittee shall utilize an EPA approved method with a method detection limit (MDL) sensitive enough to confirm compliance with the permit effluent limit for that parameter. If a MDL is not sensitive enough to confirm compliance, the most sensitive approved method must be used. If a more sensitive EPA approved method becomes available, that method shall be used. Should the current and/or new method not be sensitive enough to confirm compliance with the permitted effluent limit, analytical results reported as "not detected" at the MDL of the most sensitive method available will be deemed compliant for purposes of permit compliance. Results shall be reported on the Discharge Monitoring Reports as a numeric value less than the MDL.
11. The samples taken from Outlet(s) 002 shall be sampled for a storm event greater than 0.1 inch rainfall. These samples shall be collected during the first thirty (30) minutes (or as soon thereafter practical) of the storm event.
12. When the concentration results of a pollutant, identified in Section A.002 from a minimum of four consecutive samples of a pollutant are all less than the corresponding benchmark value for the pollutant, additional monitoring for the pollutant is not required (all pH values of the samples must be within the range 6.0 to 9.0 S.U.). The facility shall submit, each year, to the Division of Water and Waste Management, in lieu of the monitoring data, a certification (form will be provided upon request) that there has not been a significant change in the industrial activity or the pollution prevention measures in the area of the facility that drains to the outlet for which sampling is to be waived. If the concentration of a pollutant exceeds the corresponding benchmark concentration or pH value is not within the range of 6.0 to 9.0 S.U., monitoring shall be continued and storm water pollution prevention practices shall be revised and implemented. A letter stating the revised and implemented storm water pollution prevention practices shall be submitted to the Division of Water and Waste Management at the address listed in Section C.7.

Pollutant	Benchmark Value
Biological Oxygen Demand	30 mg/l
Chemical Oxygen Demand	120 mg/l
Total Ammonia, Nitrogen	4 mg/l
Total Suspended Solids	100 mg/l
Chlorides	860 mg/l
Benzene	0.010 mg/l
Oil and Grease	15 mg/l
Total Dissolved Solids	500 mg/l
Total Iron	1 mg/l
Total Copper	0.0636 mg/l
Total Zinc	0.117 mg/l
Total Aluminum	0.75 mg/l
Total Selenium	0.005 mg/l
Total Barium	5 mg/l
Phthalate Esters	0.11 mg/l
pH	6.0 to 9.0 S.U.

13. The permittee shall utilize EPA Method No. 1664 A (gravimetric analysis using the hexane extractable method [HEM]) for the analysis of oil and grease.
14. Monitoring for Phthalate Esters shall be determined by summing the individual concentrations (in ug/l) of the following individual pollutants. If each constituent's result is non-detect, the permittee shall report the result as less than the sum of all of the method detection levels. If some of the constituents are detectable values and some are non-detect, the permittee may use zero for the constituents that were non-detect when summing the results and shall report the final value as a number. The permittee shall use EPA Method No. 606 for the analysis of each pollutant listed.

Butyl benzyl phthalate
Di-n-butyl phthalate
Diethyl phthalate
Dimethyl phthalate
Di-n-octyl phthalate

Any detections of individual phthalates shall be reported as an attachment to the DMR for that reporting period.

Section C - Other Requirements

15. Effluent monitoring for the following pollutants shall be conducted using the most sensitive methods and detection levels commercially available and economically feasible. The following methods are to be used unless the permittee desires to use an EPA Approved Test Method with a listed lower method detection level. Regardless, it is recognized that detection levels can vary from analysis to analysis and that non-detect results at a different MDL for the specified test method would not constitute a permit violation.

Parameter	EPA Method No.	Method Detection Level (ug/l)
Lithium	200.7	1.0
Strontium	200.7	0.3
Titanium, Total Recoverable	200.7	20
Iron, Total Recoverable	200.7	30
Tin, Total Recoverable	200.7	0.1
Copper, Total Recoverable	200.8	0.5
Zinc, Total Recoverable	200.8	1.8
Aluminum, Total Recoverable	200.8	1
Arsenic, Total Recoverable	200.8	1.4
Cadmium, Total Recoverable	200.8	0.5
Antimony, Total Recoverable	200.8	0.4
Chromium, Total Recoverable	200.8	0.9
Cobalt, Total Recoverable	200.8	0.09
Lead, Total Recoverable	200.8	0.6
Nickel, Total Recoverable	200.8	0.5
Silver, Total Recoverable	200.8	0.1
Vanadium, Total Recoverable	200.8	2.5
Selenium, Total Recoverable	200.9	0.6
Beryllium	200.9	0.02
Hexavalent Chromium	218.6	0.3
Cyanide, Total Recoverable	335.4	5
Dibromochloromethane	524.2	0.07
Benzene	602	0.2
Phthalate Esters	606	See C.14
Fluoranthene	610	0.21
Carbazole	1625	20
n-Decane	1625	10
n-Octadecane	1625	10
Mercury, Total*	1631	0.0002
Mercury, Total*	245.7	0.0018
4-nitroquinoline-1-oxide	**	**
Gross Alpha Radiation	900.0	1.0 (pCi/l)
Gross Beta Radiation	900.0	4.0 (pCi/l)
Radium 226	903.1	0.1 (pCi/l)
Radium 228	904.0	1.0 (pCi/l)
Strontium-90	905.0	0.5 (pCi/l)

* The permittee shall use Method 1631 or Method 245.7 for Total Mercury.

** See Section C.29.

16. The permittee shall submit DMRs each month even if no discharge has occurred during the entire monitoring period and shall submit DMRs reporting "No Discharge" or "No Flow" for that monitoring period.
17. The permittee shall not accept any drilling or development wastewater from offsite sources that contain measurable amounts of Technically Enhanced Natural Occurring Radioactive Materials (TENORM) above background concentrations (as defined by 64 CSR 23 of the State Code) without prior certification from the WV Department of Human Health or the Nuclear Regulatory Commission. The permittee must modify this permit upon certification to accept TENORM wastewater.

Section C - Other Requirements

18. The permittee must modify this permit prior to accepting any new source of wastewater for centralized wastewater treatment unless raw water analytical sampling results for all characteristics in Table XVII of the NPDES permit applications (Form I excluding dioxin, pesticides and PCBs) indicate that the wastewater is significantly similar to an existing acceptable source (ECA(FB), GEB Rader No.1(FB), Blackshears101(FB), Oxford16 (PW), Oxford17 (FB), Wilfong-Sanders(PW), and U-Dell(PW) as submitted with the permit applications) and comply with the limitations and requirements in Section A.201 and Section C.19. Analytical sampling results from each new source shall be documented and kept onsite for DWWM personnel review and included as part of permit renewal applications.

19. a. The acceptance of the wastewater for centralized waste treatment is contingent upon proper operation and maintainance of the wastewater treatment system consisting of a 2500 bbl settling basin (w/ metals treatment), suspended solids separation unit, oil/water separator, granular activated carbon (GAC-1,2), a multi-effect evaporator, and all necessary appurtenances prior to discharge into the "clean" water pond.

- 1) No wastewater source shall be introduced at a concentration that shall cause or contribute to pass through, interference, or upset of the centralized waste treatment facility.

* Limitations in Section C.19.a.2 and C.19.b are based on bench/pilot scale study data submitted with the permit applications. Upon establishment of the variability of site specific removal efficiencies calculated at steady state operation of the full scale treatment system the permittee may request revision of these values. Site specific removal efficiencies shall be based on a minimum of 4 data points and valid across the full range of concentrations that may be accepted by the facility.

- 2) The wastewater approved for acceptance from all sources is natural gas well development and production water only. No other wastewater types may be accepted without prior approval from the Director. Until such time that the permittee establishes full scale removal efficiency variability data for the centralized wastewater treatment system, any detectable analytical results above the maximum limits listed below shall not be accepted for treatment without prior approval from the Director:

Parameter	Maximum Limit
Chlorides	380,000 mg/l
Cadmium	2 mg/l
Selenium	1.6 mg/l
Total Dissolved Solids	490,000 mg/l
Beryllium	0.007 mg/l
Benzene	2.9 mg/l
Antimony	3.2 mg/l
Arsenic	1.7 mg/l
Ammonia, Nitrogen	687 mg/l
Nitrite, Nitrogen	11.3 mg/l
Nitrate, Nitrogen	807 mg/l
Fluoride	1900 mg/l
Iron	1133 mg/l
Aluminum	52 mg/l
Chloroform	7.6 mg/l
Phthalate Esters	0.08 mg/l
Dibromochloromethane	0.37 mg/l
Hexavalent Chromium	0.33 mg/l
Strontium	330,217 mg/l
Strontium-90	5000 pCi/l
Boron	12,000 mg/l
Lithium	383 mg/l
Radium 226+228	600 pCi/l
Silver	2.9 mg/l
Sulfate	6867 mg/l

Section C - Other Requirements

19. b. SAMPLING AND REPORTING PROCEDURES:

For all composite samples in Section A.201 a collection and combination of a minimum of three equal volume aliquots of the discharge into the centralized wastewater treatment system shall be collected. Aliquots shall be collected immediately after the start of the discharge, at the approximate mid point, and immediately preceding the end of discharge. The following requirements apply to the acceptance of wastewater from all natural gas well development and production wastewater sources.

1) Internal Outlet 201

A raw water sample shall be collected and analyzed in accordance with Section A of this permit (per the approved methods in Section C.15) upon acceptance of wastewater from the drilling and development wastewater for all parameters listed in Section A.201. Any detectable result above the following local limits require recycle back to the raw water pond or headworks settling basins after the initial distillation step (i.e. double distillation) or use as process steam only:

Parameter	Local Limit*
Chlorides	114,000 mg/l
Cadmium	0.6 mg/l
Selenium	0.48 mg/l
Total Dissolved Solids	147,000 mg/l
Beryllium	0.002 mg/l
Benzene	0.86 mg/l
Antimony	0.95 mg/l
Arsenic	0.5 mg/l
Ammonia, Nitrogen	206 mg/l
Nitrite, Nitrogen	3.4 mg/l
Nitrate, Nitrogen	242 mg/l
Fluoride	570 mg/l
Iron	340 mg/l
Aluminum	15.6 mg/l
Phthalate Esters	0.025 mg/l
Dibromochloromethane	0.112 mg/l
Chloroform	2.3 mg/l
Hexavalent Chromium	0.1 mg/l
Strontium	99,065 mg/l
Boron	3600 mg/l
Lithium	115 mg/l
Silver	0.863 mg/l
Sulfate	2060 mg/l

20. The Groundwater Protection Plan (GPP) shall be maintained at the plant site and shall be available for inspection by the Division of Water and Waste Management personnel.
 21. The permittee shall implement and maintain the storm water pollution prevention plan (SWPPP) for the site. The plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with the industrial activity at the facility and to assure compliance with the terms and conditions of this permit. A copy of this document shall be retained at the site for review upon request.
 22. The facility shall develop, submit, and maintain a Spill Prevention Control and Countermeasures (SPCC) Plan within 90 days of the issue date of the permit as required by Section 311(j) of the Clean Water Act. At a minimum the plan shall include all the required elements in 40 CFR 112 of the Code of Federal Regulations and be independently certified by a licensed professional engineer.
 23. Prior to disposing of any solids generated by metals or oil recovery, the headworks settling basin, the raw water impoundment, or the "clean" water impoundment the permittee shall submit a letter of acceptance from the disposal facility to this Division.
- This does not apply to any normal solid wastes (trash/refuse) generated by the standard operation of the facility. However, those normal solid wastes shall be disposed of in a manner consistent with any, and all, appropriate laws and regulations.
24. Discharge of polychlorinated biphenyl compounds (PCBs) through any outfall is prohibited.

Section C - Other Requirements

25. The permittee shall keep a daily log of wastewater accepted at the facility. The log shall identify the following at a minimum: date of acceptance, name of facility submitting wastewater, person's name submitting wastewater, the type and source of the wastewater, the quantity of the wastewater received, person's name receiving wastewater, and the required operation of the distillation unit (i.e. single distillation, double distillation, or recycle only) based on the source and associated analytical results. Documentation of the daily log shall be retained onsite and be readily available for review by agency personnel.
26. The facility shall keep a daily log of results of a visual assessment of the "clean water" pond and Outlet 001. These areas must be visually inspected, at a minimum, for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of pollution. In addition, Outlet 001 shall be inspected daily for a discharge and the daily log shall indicate whether or not there was a discharge. Documentation of the daily log shall be retained onsite and be readily available for review by agency personnel.
27. The sampling frequency at Outlet 001 shall be once per daily discharge during the entire duration of the discharge. If the permittee discharges on two consecutive days, samples are required to be collected for each day. If a 24-hour composite cannot be collected (daily discharge is less than 24 hours), then composite samples shall be collected over the actual duration of the discharge. The permittee may request modification of the sampling frequency in Section A.001 upon establishment of normal operating conditions and collection of sufficient supporting documentation.
28. At a minimum, the raw water pond shall be lined with a double synthetic liner and leak detection and removal system consisting of two 60-millimeter HDPE (upper and lower liners), synthetic geonet leak detection and removal layer, and leak collection piping.

At a minimum, the fresh water pond shall be lined with synthetic liner consisting of a 60-millimeter HDPE liner and a minimum 10 ounce geotextile lower liner.

Installation of the minimum controls specified above does not relieve the permittee from future installation of additional engineering controls and/or remediation of impacts upon migration of pollutants from the raw and fresh water ponds to waters of the State.

29. Monitoring for total nitrated hydrocarbons shall be determined by summing the individual concentrations (in ug/l) of the following individual parameters. If each constituent's result is non-detect, the permittee shall report the result as less than the sum of all of the method detection levels. If some of constituents are detectable values and some are non-detect, the permittee may use zero for the constituents that were non-detect when summing the results and shall report the final value as a number. The permittee shall use EPA Method 8091 or EPA Method 8270C (SW-846) for the analysis of each pollutant listed based on the minimum method detection limit achievable that is commercially available.

- a. 4-nitroquinoline-1-oxide (4-NQO)
1,4-dinitrobenzene
2,4-dinitrotoluene
2,6-dinitrotoluene
1,4-naphthoquinone
Nitrobenzene
Pentachloronitrobenzene

Any detection of an individual nitrated hydrocarbon listed above shall be summarized and reported as an attachment to the DMR for that reporting period.

30. Sampling at Internal Outlet 201 shall be representative of all the various natural gas well development and production wastewater sources accepted. Therefore, the permittee shall be required to alternate sampling at Internal Outlet 201 to be representative of the different sources of wastewater accepted. Successive samples from the same source shall not be taken unless no other sources are accepted during the reporting period.
31. Baseline groundwater quality shall be established at all groundwater wells installed at the facility within 180 days of startup for all parameters listed in Section A.201 of the permit. During the last year of this permit, the permittee shall resample all groundwater monitoring wells at the facility and submit the results along with any other groundwater monitoring results with the permit reissuance application.

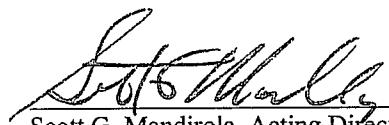
Section C - Other Requirements

32. Within ninety days of the issuance date of this permit, the permittee shall work with laboratories and the WV Laboratory Certification Program to obtain WV laboratory certification for the analysis of Strontium 90. During this ninety days, the permittee may use a non-WV certified laboratory for the analysis of Strontium 90 since WV currently does not have any certified laboratories for this parameter.

The herein-described activity is to be extended, modified, added to, made, enlarged, acquired, constructed or installed, and operated, used and maintained strictly in accordance with the terms and conditions of this permit, with the plans and specifications submitted with Permit Application No. WV0116408; with the plan of maintenance and method of operation thereof submitted with such application(s); and with any applicable rules and regulations promulgated by the Environmental Quality Board and the Secretary of the Department of Environmental Protection.

Failure to comply with the terms and conditions of this permit, with the plans and specifications submitted with Permit Application No. WV0116408; and with the plan of maintenance and method of operation thereof submitted with such application(s) shall constitute grounds for the revocation or suspension of this permit and the invocation of all the enforcement procedures set forth in Chapter 22, Article 11, or 15 of the Code of West Virginia.

This permit is issued in accordance with the provisions of Chapter 22, Article 11 and 12 and/or 15 of the Code of West Virginia and is transferable under the terms of Section 11 of Article 11.



Scott G. Mandriola, Acting Director

Appendix A

I. MANAGEMENT CONDITIONS:

1. Duty to Comply

- a) The permittee must comply with all conditions of this permit. Permit noncompliance constitutes a violation of the CWA and State Act and is grounds for enforcement action; for permit modification, revocation and reissuance, suspension or revocation; or for denial of a permit renewal application.
- b) The permittee shall comply with all effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

2. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit at least 180 days prior to expiration of the permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment.

4. Permit Actions

This permit may be modified, revoked and reissued, suspended, or revoked for cause. The filing of a request by the permittee for permit modification, revocation and reissuance, or revocation, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

6. Signatory Requirements

All applications, reports, or information submitted to the Director shall be signed and certified as required in Title 47, Series 10, Section 4.6 of the West Virginia Legislative Rules.

7. Transfers

This permit is not transferrable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable specified time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, suspending, or revoking this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

9. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a) Enter upon the permittee's premises in which an effluent source or activity is located, or where records must be kept under the conditions of this permit;
- b) Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the State Act, any substances or parameters at any location.

11. Permit Modification

This permit may be modified, suspended, or revoked in whole or in part during its term in accordance with the provisions of Chapter 22-11-12 of the Code of West Virginia.

12. Water Quality

Subject to 47 WV CSR 10.3.4.a, the effluent or effluents covered by this permit are to be of such quality so as not to cause violation of applicable water quality standards adopted by the Environmental Quality Board.

13. Outlet Markers

A permanent marker at the establishment shall be posted in accordance with Title 47, Series 11, Section 9 of the West Virginia Legislative Rules.

14. Liabilities

- a) Any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing sections 301, 302, 306, 307, 308 or 405 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.
- b) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years, or by both.
- c) Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years, or by both.
- d) Nothing in I.14 a), b), and c) shall be construed to limit or prohibit any other authority the Director may have under the State Water Pollution Control Act, Chapter 22, Article 11.

II. OPERATION AND MAINTENANCE:

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. Unless otherwise required by Federal or State law, this provision requires the operation of back-up auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit. For domestic waste treatment facilities, waste treatment operators as classified by the WV Bureau of Public Health Laws, W. Va. Code Chapter 16-1, will be required except that in circumstances where the domestic waste treatment facility is receiving any type of industrial waste, the Director may require a more highly skilled operator.

2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

3. Bypass

- a) Definitions
 - (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility; and
 - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of II.3.c) and II.3.d) of this permit.
- c) (1) If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass;
 - (2) If the permittee does not know in advance of the need for bypass, notice shall be submitted as required in IV.2.b) of this permit.
- d) Prohibition of bypass
 - (1) Bypass is permitted only under the following conditions, and the Director may take enforcement action against a permittee for a bypass, unless:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (C) The permittee submitted notices as required under II.3.c) of this permit.
 - (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in II.3.d.(1) of this permit.

4. Upset

- a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitation if the requirements of II.4.c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in IV.2.b) of this permit.
 - (4) The permittee complied with any remedial measures required under I.3. of this permit.
- d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Removed Substances

Where removed substances are not otherwise covered by the terms and conditions of this permit or other existing permit by the Director, any solids, sludges, filter backwash or other pollutants (removed in the course of treatment or control of wastewaters) and which are intended for disposal within the State, shall be disposed of only in a manner and at a site subject to the approval by the Director. If such substances are intended for disposal outside the State or for reuse, i.e., as a material used for making another product, which in turn has another use, the permittee shall notify the Director in writing of the proposed disposal or use of such substances, the identity of the prospective disposer or users, and the intended place of disposal or use, as appropriate.

III. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Reporting

- a) Permittee shall submit, according to the enclosed format, a Discharge Monitoring Report (DMR) indicating in terms of concentration, and/or quantities, the values of the constituents listed in Part A analytically determined to be in the plant effluent(s). DMR submissions shall be made in accordance with the terms contained in Section C of this permit.
- b) Enter reported average and maximum values under "Quantity" and "Concentration" in the units specified for each parameter, as appropriate.
- c) Specify the number of analyzed samples that exceed the allowable permit conditions in the columns labeled "N.E." (i.e., number exceeding).
- d) Specify frequency of analysis for each parameter as number of analyses/specify period (e.g., 3/month is equivalent to 3 analyses performed every calendar month). If continuous, enter "Cont.". The frequency listed on format is the minimum required.

3. Test Procedures

Samples shall be taken, preserved and analyzed in accordance with the latest edition of 40 CFR Part 136, unless other test procedures have been specified elsewhere in this permit.

4. Recording of Results

For each measurement or sample taken pursuant to the permit, the permittee shall record the following information.

- a) The date, exact place, and time of sampling or measurement;
- b) The date(s) analyses were performed;
- c) The individual(s) who performed the sampling or measurement;
- d) The individual(s) who performed the analyses; if a commercial laboratory is used, the name and address of the laboratory;
- e) The analytical techniques or methods used, and
- f) The results of such analyses. Information not required by the DMR form is not to be submitted to this agency, but is to be retained as required in III.6.

5. Additional Monitoring by Permittee

If the permittee monitors any pollutant at any monitoring point specified in this permit more frequently than required by this permit, using approved test procedures or others as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report Form. Such increased frequency shall also be indicated. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

6. Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

7. Definitions

- a) "Daily discharge" means the discharge of a pollutant measured during a calendar day or within any specified period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.
- b) "Average monthly discharge limitation" means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
- c) "Maximum daily discharge limitation" means the highest allowable daily discharge.
- d) "Composite Sample" is a combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to discharge flow rates or the sampling interval (for constant volume samples) is proportional to the flow rates over the time period used to produce the composite. The maximum time period between individual samples shall be two hours.
- e) "Grab Sample" is an individual sample collected in less than 15 minutes.
- f) "Is" = immersion stabilization - a calibrated device is immersed in the effluent stream until the reading is stabilized.
- g) The "daily average temperature" means the arithmetic average of temperature measurements made on an hourly basis, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar month, or during the operating month if flows are of shorter duration.
- h) The "daily maximum temperature" means the highest arithmetic average of the temperatures observed for any two (2) consecutive hours during a 24 hour day, or during the operating day if flows are of shorter duration.
- i) The "monthly average fecal coliform" bacteria is the geometric average of all samples collected during the month.
- j) "Measured Flow" means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or which a relationship to absolute volume has been obtained.
- k) "Estimate" means to be based on a technical evaluation of the sources contributing to the discharge including, but not limited to pump capabilities, water meters and batch discharge volumes.
- l) "Non-contact cooling water" means the water that is contained in a leak-free system, i.e., no contact with any gas, liquid, or solid other than the container for transport; the water shall have no net poundage addition of any pollutant over intake water levels, exclusive of approved anti-fouling agents.

IV. OTHER REPORTING

1. Reporting Spills and Accidental Discharges

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to Title 47, Series 11, Section 2 of the West Virginia Legislative Rules promulgated pursuant to Chapter 22, Article 11. Attached is a copy of the West Virginia Spill Alert System for use in complying with Title 47, Series 11, Section 2 of the Legislative rules as they pertain to the reporting of spills and accidental discharges.

2. Immediate Reporting

- a) The permittee shall report any noncompliance which may endanger health or the environment immediately after becoming aware of the circumstances by using the Agency's designated spill alert telephone number. A written submission shall be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- b) The following shall also be reported immediately:
 - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - (2) Any upset which exceeds any effluent limitation in the permit; and
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported immediately. This list shall include any toxic pollutant or hazardous substance, or any pollutant specifically identified as the method to control a toxic pollutant or hazardous substance.
- c) The Director may waive the written report on a case-by-case basis if the oral report has been received in accordance with the above.
- d) Compliance with the requirements of IV.2 of this section, shall not relieve a person of compliance with Title 47, Series 11, Section 2.

3. Reporting Requirements

- a) Planned changes. The permittee shall give notice to the Director of any planned physical alterations or additions to the permitted facility which may affect the nature or quantity of the discharge. Notice is required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in Section 13.7.b of Series 10, Title 47; or
 - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under IV.2 of this section.
- b) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c) In addition to the above reporting requirements, all existing manufacturing, commercial, and silvicultural discharges must notify the Director in writing as soon as they know or have reason to believe:
 - (1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, or any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (A) One hundred micrograms per liter (100 ug/l);
 - (B) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitro phenol; and for 2-methyl 4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (C) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Section 4.4.b.9 of Series 10, Title 47.
 - (D) The level established by the Director in accordance with Section 6.3.g of Series 10, Title 47;
 - (2) That any activity has occurred or will occur which would result in any discharge (on a non-routine or infrequent basis) of a toxic which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (A) Five hundred micrograms per liter (500 ug/l);
 - (B) One milligram per liter (1 mg/l) for antimony;
 - (C) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Section 4.4.b.7 of Series 10, Title 47;
 - (D) The level established by the Director in accordance with Section 6.3.g of Series 10, Title 47.
 - (3) That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product of any toxic pollutant which was not reported in the permit application under Section 4.4.b.9 of Series 10, Title 47 and which will result in the discharge on a routine or frequent basis of that toxic pollutant at levels which exceed five times the detection limit for that pollutant under approved analytical procedure.
 - (4) That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product of any toxic pollutant which was not reported in the permit application under Section 4.4.b.9 of Series 10, Title 47 and which will result in the discharge on a non-routine or infrequent basis of that toxic pollutant at levels which exceed ten times the detection limit for that pollutant under approved analytical procedure.

4. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under the above paragraphs at the time monitoring reports are submitted. The reports shall contain the information listed in IV.2.a). Should other applicable noncompliance reporting be required, these terms and conditions will be found in Section C of this permit.

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

OUTLET NO.: 001

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
		Units	N.E.								
50050 (ML-1) RF-A Flow,in Conduit or thru plant Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	0.288 Max. Daily	N/A	mgd		Once/Daily Discharge	measured
004400 (ML-1) RF-A pH Year Round	Reported Permit Limits	N/A N/A		6 Inst. Min.	N/A Inst. Max.	9	N/A	S.U.		Once/Daily Discharge	Grab
00610 (ML-1) RF-A Ammonia Nitrogen Year Round	Reported Permit Limits	N/A N/A		N/A	17.7 Avg. Monthly	35.5 Max. Daily	N/A	mg/l		Once/Daily Discharge	24 hr Composite
00620 (ML-1) RF-A Nitrogen Nitrate Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		Once/Daily Discharge	24 hr Composite
006115 (ML-1) RF-A Nitrogen Nitrite Year Round	Reported Permit Limits	N/A N/A		N/A	0.655 Avg. Monthly	1.31 Max. Daily	N/A	mg/l		Once/Daily Discharge	24 hr Composite
006600 (ML-1) RF-A Nitrogen, Total (as N) Year Round	Reported Permit Limits	Rpt Only Avg. Monthly	Rpt Only Max. Daily	Lbs/Day			N/A	mg/l		Once/Daily Discharge	24 hr Composite
006665 (ML-1) RF-A Phosphorus, Total Year Round	Reported Permit Limits	Rpt Only Avg. Monthly	Rpt Only Max. Daily	Lbs/Day			N/A	mg/l		Once/Daily Discharge	24 hr Composite
011113 (ML-1) RF-A Cadmium, Total Recoverable Year Round	Reported Permit Limits	N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		Once/Daily Discharge	24 hr Composite

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

I certify under penalty of law that this document and all attachments were prepared
under my direction or supervision in accordance with a system designed to assure that
qualified personnel properly gather and evaluate the information submitted. Based on
my inquiry of the person or persons who manage the system, or those persons directly
responsible for gathering the information, the information submitted is to the best of my
knowledge and belief true, accurate, and complete. I am aware that there are significant
penalties for submitting false information including the possibility of a fine and
imprisonment for knowing violations.

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units	CEL	Units	N.E.	Measurement Frequency	Sample Type
	Units	N.E.	Units						
01079 (ML-1) RF-A Silver, Total Recoverable Year Round	Reported N/A	N/A		N/A	0.006 Avg. Monthly	0.013 Max. Daily	N/A	mg/l	Once/Daily Discharge
01104 (ML-1) RF-A Aluminum, Total Recoverable Year Round	Reported N/A	N/A		N/A	0.782 Avg. Monthly	1.57 Max. Daily	N/A	mg/l	Once/Daily Discharge
00980 (ML-1) RF-A Iron, Total Recoverable Year Round	Reported N/A	N/A		N/A	4.61 Avg. Monthly	8.21 Max. Daily	N/A	mg/l	Once/Daily Discharge
00940 (ML-1) RF-A Chloride (as Cl) Year Round	Reported N/A	N/A		N/A	912 Avg. Monthly	1771 Max. Daily	N/A	mg/l	Once/Daily Discharge
00951 (ML-1) RF-A Fluoride, Total Year Round	Reported N/A	N/A		N/A	6.27 Avg. Monthly	9.15 Max. Daily	N/A	mg/l	Once/Daily Discharge
61426 (ML-1) RF-A Chronic Tox-Ceriodaphnia Dubia Year Round	Reported N/A	N/A		N/A	4.1 Avg. Monthly	8.2 Max. Daily	N/A	TUc	Once/Daily Discharge
61428 (ML-1) RF-A Chronic Toxicity - Pimephales Year Round	Reported N/A	N/A		N/A	4.1 Avg. Monthly	8.2 Max. Daily	N/A	TUc	Once/Daily Discharge
34030 (ML-1) RF-A Benzene Year Round	Reported N/A	N/A		N/A	2.6 Avg. Monthly	3.7 Max. Daily	N/A	ug/l	Once/Daily Grab

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

AOP CLEARWATER, LLC

CERTIFIED LABORATORY NAME:

FAIRMONT; Marion County

CERTIFIED LABORATORY ADDRESS:

OUTLET NO.: 001

WASTELOAD FOR THE MONTH OF:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.								
39117 (ML-1) RF-A Phthalate Esters Year Round	Reported Permit Limits	N/A N/A			N/A	7 Avg. Monthly	13.3 Max. Daily	N/A	ug/l	Once/Daily Discharge	24 hr Composite
00981 (ML-1) RF-A Selenium, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	0.013 Avg. Monthly	0.026 Max. Daily	N/A	mg/l	Once/Daily Discharge	24 hr Composite
00978 (ML-1) RF-A Arsenic, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	0.024 Avg. Monthly	0.035 Max. Daily	N/A	mg/l	Once/Daily Discharge	24 hr Composite
01007 (ML-1) RF-A Barium, Total (as Ba) Year Round	Reported Permit Limits	N/A N/A			N/A	4.84 Avg. Monthly	7.06 Max. Daily	N/A	mg/l	Once/Daily Discharge	24 hr Composite
70295 (ML-1) RF-A Solids, Total Dissolved (TDS) Year Round	Reported Permit Limits	N/A N/A			N/A	500 Avg. Monthly	750 Max. Daily	N/A	mg/l	Once/Daily Discharge	24 hr Composite
01097 (ML-1) RF-A Antimony, Total (as Sb) Year Round	Reported Permit Limits	N/A N/A			N/A	0.019 Avg. Monthly	0.028 Max. Daily	N/A	mg/l	Once/Daily Discharge	24 hr Composite
32105 (ML-1) RF-A Dibromochloromethane Year Round	Reported Permit Limits	N/A N/A			N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	ug/l	Once/Daily Discharge	Grab
00999 (ML-1) RF-A Boron, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	35.8 Avg. Monthly	52.7 Max. Daily	N/A	mg/l	Once/Daily Discharge	24 hr Composite

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

OUTLET NO.: 001

PERMIT NO.: WV0116408

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME: _____

CERTIFIED LABORATORY ADDRESS: _____

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity				Other Units				Measurement Frequency	Sample Type
		Units	N.E.		CEL*	Units	N.E.			
32106 (ML-1) RF-A	Reported	N/A			N/A	26	37.9	N/A	Once/Daily Discharge	24 hr Composite
Chloroform Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
81020 (ML-1) RF-A	Reported	N/A			N/A	Rpt Only	250	N/A	Once/Daily Discharge	24 hr Composite
Sulfate Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
00998 (ML-1) RF-A	Reported	N/A			N/A	0.023	0.034	N/A	Once/Daily Discharge	24 hr Composite
Beryllium, Total Recoverable Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
78247 (ML-1) RF-A	Reported	N/A			N/A	0.02	0.04	N/A	Once/Daily Discharge	24 hr Composite
Chromium, Hexavalent Total Rec Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
82077 (ML-1) RF-A	Reported	N/A			N/A	7.5	15	N/A	Once/Daily Discharge	24 hr Composite
Radiation, Gross Alpha Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
03520 (ML-1) RF-A	Reported	N/A			N/A	498	1000	N/A	Once/Daily Discharge	24 hr Composite
Radiation, Gross Beta Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
11503 (ML-1) RF-A	Reported	N/A			N/A	2.5	5	N/A	Once/Daily Discharge	24 hr Composite
Radium 226 and 228, Total Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			
01082 (ML-1) RF-A	Reported	N/A			N/A	109	159	N/A	Once/Daily Discharge	24 hr Composite
Strontium, Total (as Sr) Year Round	Permit Limits	N/A			N/A	Avg. Monthly	Max. Daily			

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer _____

Title of Officer _____

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

CERTIFIED LABORATORY NAME:

PERMIT NO.: WV0116408

CERTIFIED LABORATORY ADDRESS:

OUTLET NO.: 001

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.	Reported	Units	N.E.					
13501 (ML-1) RF-A	Reported	N/A		Reported	N/A		N/A	5 Avg. Monthly	10 Max. Daily	N/A pCi/L	Once/Daily Discharge
Strontium 90, Total Year Round	Permit Limits	N/A		011132 (ML-1) RF-A	Reported	N/A	N/A	0.355 Avg. Monthly	0.518 Max. Daily	N/A mg/l	Once/Daily Discharge
Lithium, Total (as Li)	Permit Limits	N/A		81308 (ML-1) RF-A	Reported	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A ug/l	24 hr Composite
Total Nitrated Hydrocarbons Year Round	Permit Limits	N/A								N/A	Once/Daily Discharge
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab
										N/A	Grab

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer
[Redacted]

Title of Officer
[Redacted]

Date Completed	[Redacted]
Signature of Principal Executive Officer or Authorized Agent	[Redacted]

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

OUTLET NO.: 002

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Units	N.E.									
50050 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mgd	1/quarter	Estimated
Flow,in Conduit or thru plant Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
00310 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mg/l	1/quarter	Grab
BOD, 5-Day 20 Deg. C Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
00530 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mg/l	1/quarter	Grab
Total Suspended Solids Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
004400 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Inst. Min.	N/A	N/A	S.U.	1/quarter	Grab
pH Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
00610 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mg/l	1/quarter	Grab
Ammonia Nitrogen Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
01119 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mg/l	1/quarter	Grab
Copper, Total Recoverable Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
01094 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mg/l	1/quarter	Grab
Zinc, Total Recoverable Year Round	Permit Limits	N/A			Rpt Only	Max. Daily					
01104 (ML-1) RF-B	Reported	N/A	N/A	N/A	Rpt Only	Avg. Monthly	N/A	N/A	mg/l	1/quarter	Grab
Aluminum, Total Recoverable Year Round	Permit Limits	N/A			Rpt Only	Max. Daily				1/quarter	Grab

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer

Date Completed

Signature of Principal Executive Officer or Authorized Agent

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

CERTIFIED LABORATORY NAME:

PERMIT NO.: WV0116408

CERTIFIED LABORATORY ADDRESS:

OUTLET NO.: 002

INDIVIDUAL PERFORMING ANALYSIS:

WASTELOAD FOR THE MONTH OF:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.								
00940 (ML-1) RF-B Chloride (as Cl) Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		1/quarter	Grab
34030 (ML-1) RF-B Benzene Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	ug/l		1/quarter	Grab
39117 (ML-1) RF-B Phthalate Esters Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	ug/l		1/quarter	Grab
00981 (ML-1) RF-B Selenium, Total Recoverable Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		1/quarter	Grab
01007 (ML-1) RF-B Barium, Total (as Ba) Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		1/quarter	Grab
01045 (ML-1) RF-B Iron, Total (as Fe) Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		1/quarter	Grab
81017 (ML-1) RF-B Chem. Oxygen Demand Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		1/quarter	Grab
00552 (ML-1) RF-B Oil and Grease, Hexane EXTR. Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l		1/quarter	Grab

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible to gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC
 LOCATION OF FACILITY: FAIRMONT; Marion County
 PERMIT NO.: WV0116408
 WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:
 CERTIFIED LABORATORY ADDRESS:
 OUTLET NO.: 002

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units				CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.			CEL	Units					
Total Dissolved Solids (TDS) Year Round	N/A	N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					
							N/A					

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and/or imprisonment for knowing violations.
-------------------------------------	---

Title of Officer	
------------------	--

Date Completed	
Signature of Principal Executive Officer or Authorized Agent	

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

OUTLET NO.: 101

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:
CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity	Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
		Units	N.E.	Other Units					
50050 (ML-1) RF-A Flow,in Conduit or thru plant Year Round	Reported Permit Limits	N/A N/A			N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mgd
00530 (ML-1) RF-A Total Suspended Solids Year Round	Reported Permit Limits	N/A N/A			N/A	11.3 Avg. Monthly	29.6 Max. Daily	N/A	mg/l
00400 (ML-1) RF-A pH Year Round	Reported Permit Limits	N/A N/A			N/A	6 Inst. Min.	9 Inst. Max.	N/A	S.U.
01119 (ML-1) RF-A Copper, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	0.216 Avg. Monthly	0.5 Max. Daily	N/A	mg/l
01114 (ML-1) RF-A Lead, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	0.16 Avg. Monthly	0.35 Max. Daily	N/A	mg/l
01094 (ML-1) RF-A Zinc, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	0.252 Avg. Monthly	0.657 Max. Daily	N/A	mg/l
01113 (ML-1) RF-A Cadmium, Total Recoverable Year Round	Reported Permit Limits	N/A N/A			N/A	0.0102 Avg. Monthly	0.0172 Max. Daily	N/A	mg/l
71900 (ML-1) RF-A Mercury, Total (as Hg) Year Round	Reported Permit Limits	N/A N/A			N/A	0.246 Avg. Monthly	0.641 Max. Daily	N/A	ug/l

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer
Title of Officer

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

Certify under penalty of law that this document and all attachments were prepared
under my direction or supervision in accordance with a system designed to assure that
qualified personnel properly gather and evaluate the information submitted. Based on
my inquiry of the person or persons who manage the system, or those persons directly
responsible for gathering the information, the information submitted is to the best of my
knowledge and belief true, accurate, and complete. I am aware that there are significant
penalties for submitting false information including the possibility of a fine and
imprisonment for knowing violations.

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

OUTLET NO.: 101

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Units	N.E.	CEL	Units	N.E.	CEL*					
01074 (ML-1) RF-A	Reported	N/A	N/A	N/A	0.309	0.794	N/A	mg/l	2/month	8 hr comp	
Nickel, Total Recoverable Year Round	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
01079 (ML-1) RF-A	Reported	N/A	N/A	N/A	0.0122	0.0318	N/A	mg/l	2/month	8 hr comp	
Silver, Total Recoverable Year Round	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
34376 (ML-1) RF-A	Reported	N/A	N/A	N/A	26.8	53.7	N/A	ug/l	2/month	8 hr comp	
Fluoranthene	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
00981 (ML-1) RF-A	Reported	N/A	N/A	N/A	0.0698	0.176	N/A	mg/l	2/month	8 hr comp	
Selenium, Total Recoverable Year Round	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
00978 (ML-1) RF-A	Reported	N/A	N/A	N/A	0.0199	0.0993	N/A	mg/l	2/month	8 hr comp	
Arsenic, Total Recoverable Year Round	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
01097 (ML-1) RF-A	Reported	N/A	N/A	N/A	0.0312	0.111	N/A	mg/l	2/month	8 hr comp	
Antimony, Total (as Sb) Year Round	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
00720 (ML-1) RF-A	Reported	N/A	N/A	N/A	178	500	N/A	mg/l	2/month	Grab	
Cyanide, Total	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						
39100 (ML-1) RF-A	Reported	N/A	N/A	N/A	101	205	N/A	ug/l	2/month	8 hr comp	
Bis(2-Ethylhexyl) Phthalate	Permit Limits	N/A	Avg. Monthly	N/A	Max. Daily						

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer

Date Completed

Signature of Principal Executive Officer or
Authorized Agent

I certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

WASTELOAD FOR THE MONTH OF:

OUTLET NO.: 101

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			CEL*	Units	NE	Measurement Frequency	Sample Type
	Reported	Units	N.E.								
01102 (ML-1) RF-A	Reported	N/A		N/A	0.0367	0.0955	N/A	mg/l	2/month	8 hr comp	
Tin, Total Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
01118 (ML-1) RF-A	Reported	N/A		N/A	0.0522	0.167	N/A	mg/l	2/month	8 hr comp	
Chromium, Total Recoverable Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
01087 (ML-1) RF-A	Reported	N/A		N/A	0.0518	0.0628	N/A	mg/l	2/month	8 hr comp	
Vanadium, Total (as V) Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
00552 (ML-1) RF-A	Reported	N/A		N/A	38	127	N/A	mg/l	2/month	Grab	
Oil and Grease, Hexane EXTR. Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
00984 (ML-1) RF-A	Reported	N/A		N/A	0.00612	0.0159	N/A	mg/l	2/month	8 hr comp	
Titanium, Total Recoverable Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
77571 (ML-1) RF-A	Reported	N/A		N/A	276	598	N/A	ug/l	2/month	8 hr comp	
Carbazole Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
01037 (ML-1) RF-A	Reported	N/A		N/A	0.0703	0.182	N/A	mg/l	2/month	8 hr comp	
Cobalt, Total (as Co) Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					
34292 (ML-1) RF-A	Reported	N/A		N/A	88.7	188	N/A	ug/l	2/month	8 hr comp	
Butyl Benzyl Phthalate Year Round	Permit Limits	N/A		N/A	Avg. Monthly	Max. Daily					

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

Date Completed

Signature of Principal Executive Officer or
Authorized Agent

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC
 LOCATION OF FACILITY: FAIRMONT; Marion County
 PERMIT NO.: WV0116408 OUTLET NO.: 101
 WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:
 CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity				Other Units				CEL*	Units	NE	Measurement Frequency	Sample Type
		Units	NE										
77427 (ML-1) RF-A N-Decane Year Round	Reported N/A	N/A			N/A	437 Avg. Monthly		948 Max. Daily	N/A	ug/l		2/month	8 hr comp
77804 (ML-1) RF-A N-Octadecane Year Round	Reported N/A	N/A			N/A	302 Avg. Monthly		589 Max. Daily	N/A	ug/l		2/month	8 hr comp

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

Certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

Date Completed _____ Signature of Principal Executive Officer or Authorized Agent _____ _____ _____
--

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

OUTLET NO.: 201

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity			Other Units			Measurement Frequency	Sample Type
	Units	N.E.	CEL*	Units	N.E.	CEL*		
00610 (ML-1) RF-A Ammonia Nitrogen Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
00620 (ML-1) RF-A Nitrogen Nitrate Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
00615 (ML-1) RF-A Nitrogen Nitrite Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
01113 (ML-1) RF-A Cadmium, Total Recoverable Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
01079 (ML-1) RF-A Silver, Total Recoverable Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
01104 (ML-1) RF-A Aluminum, Total Recoverable Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
00980 (ML-1) RF-A Iron, Total Recoverable Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp
00940 (ML-1) RF-A Chloride (as Cl) Year Round	Reported N/A	N/A	N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month Comp

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

Date Completed

Signature of Principal Executive Officer or
Authorized Agent

**STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT**

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant **AOP CLEARWATER, LLC** **CERTIFIED LABORATORY NAME:** _____
LOCATION OF FACILITY: FAIRMONT; Marion County **CERTIFIED LABORATORY ADDRESS:** _____
PERMIT NO.: WV0116408 **OUTLET NO.:** 201
WASTELOAD FOR THE MONTH OF: _____

Parameter	Quantity				Other Units				CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.										
00951 (ML-1) RF-A Fluoride, Total Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp
34030 (ML-1) RF-A Benzene Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	ug/l	2/month	Grab
39117 (ML-1) RF-A Phthalate Esters Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	ug/l	2/month	Grab
00981 (ML-1) RF-A Selenium, Total Recoverable Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp
00978 (ML-1) RF-A Arsenic, Total Recoverable Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp
01097 (ML-1) RF-A Antimony, Total (as Sb) Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp
32105 (ML-1) RF-A Dibromo-chloromethane Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	ug/l	2/month	Grab
00999 (ML-1) RF-A Boron, Total Recoverable Year Round	Reported Permit Limits N/A	N/A	N/A		N/A	Rpt Only Avg. Monthly	Max. Daily	N/A	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that only qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: AOP Clearwater - Fairmont Plant

AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

OUTLET NO.: 201

CERTIFIED LABORATORY NAME:

CERTIFIED LABORATORY ADDRESS:

PERMIT NO.: WV0116408

WASTELOAD FOR THE MONTH OF:

Parameter	Quantity			Other Units			CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.								
32106 (ML-1) RF-A Chloroform Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	ug/l	2/month	Grab	
81020 (ML-1) RF-A Sulfate Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp	
00998 (ML-1) RF-A Beryllium, Total Recoverable Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp	
01220 (ML-1) RF-A Chromium, Hex. Diss. Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp	
70296 (ML-1) RF-A Total Dissolved Solids (TDS) Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	mg/l	2/month	Comp	
82077 (ML-1) RF-A Radiation, Gross Alpha Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	pCi/l	2/month	Grab	
03520 (ML-1) RF-A Radiation, Gross Beta Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	pCi/l	2/month	Grab	
11503 (ML-1) RF-A Radium 226 and 228, Total Year Round	Reported Permit Limits	N/A N/A		N/A	Rpt Only Avg. Monthly	Rpt Only Max. Daily	N/A	pCi/l	2/month	Grab	

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer

Title of Officer _____

Date Completed _____

Signature of Principal Executive Officer or
Authorized Agent

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

STATE OF WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Final Limitations
Year Round

FACILITY NAME: (AOP Clearwater - Fairmont Plant) AOP CLEARWATER, LLC

LOCATION OF FACILITY: FAIRMONT; Marion County

PERMIT NO.: WV0116408

WASTELOAD FOR THE MONTH OF:

CERTIFIED LABORATORY NAME:
CERTIFIED LABORATORY ADDRESS:

INDIVIDUAL PERFORMING ANALYSIS:

Parameter	Quantity				Other Units				CEL*	Units	N.E.	Measurement Frequency	Sample Type
	Reported	Units	N.E.		Rpt Only	Rpt Only	N/A	mg/l					
01082 (ML-1) RF-A Strontium, Total (as Sr) Year Round	Reported N/A	N/A			N/A	Rpt Only Avg. Monthly	N/A	mg/l				2/month	Comp
13501 (ML-1) RF-A Strontium 90, Total Year Round	Reported N/A	N/A			N/A	Rpt Only Avg. Monthly	N/A	pCi/L				2/month	Grab
01132 (ML-1) RF-A Lithium, Total (as Li) Year Round	Reported N/A	N/A			N/A	Rpt Only Avg. Monthly	N/A	mg/l				2/month	Comp
81308 (ML-1) RF-A Total Nitrated Hydrocarbons Year Round	Reported N/A	N/A			N/A	Rpt Only Avg. Monthly	N/A	mg/l				2/month	Comp
							N/A						

* CEL = Compliance Evaluation Level

Name of Principal Executive Officer
Title of Officer

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted, based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, that information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.

Date Completed	Signature of Principal Executive Officer or Authorized Agent
----------------	--

NOTICE TO PERMITTEES

The 1999 regular session of the West Virginia legislature revised the Water Pollution Control Act, Chapter 22, Article 11, Section 10 of the Code of West Virginia relating to fees associated with permits. This section of the Code requires all holders of a State water pollution control permit or a national pollutant discharge elimination system permit to be assessed an annual permit fee, based upon rules promulgated by the Secretary of the Department of Environmental Protection. The Secretary has promulgated a final rule in accordance with the code revision to this effect and these rules were effective May 4, 2000. The rules establish an annual permit fee based upon the relative potential to degrade the waters of the State which, in most instances, relate to volume of discharge. However, for sewage facilities, the annual permit fee is based upon the number of customers served by the facility. You may contact the Secretary of State's Office, State Capitol Building, Charleston, WV 25305, to obtain a copy of the rules. The reference is Title 47, Legislative Rules, Department of Environmental Protection, Division of Water Resources, Series 26 Water Pollution Control Permit Fee Schedules.

Based upon the volume of discharge for which your facility is currently permitted, the number of customers served by your facility or for the category you fall within, pursuant to Section 7 of Title 47, Series 26, your annual permit fee is **\$5000.00**. This fee is due no later than the anniversary date of permit issuance in each year of the term of the permit or in the case of coverage under a general permit, the fee is due no later than the anniversary date of your coverage under the general permit. **You will be invoiced by this agency at the appropriate time for the fee.** Failure to submit the annual fee within ninety(90) days of the due date will render your permit void upon the date you are mailed a certified written notice to that effect.

**EMERGENCY RESPONSE SPILL ALERT SYSTEM
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

REQUIREMENTS:

Title 47, Series 11, Section 2 of the West Virginia Legislative Rules, Environmental Protection, Water Resources - Waste Management, Effective July 1, 1994.

RESPONSIBILITY FOR REPORTING:

Each and every person who may cause or be responsible for any spill or accidental discharge of pollutants into the waters of the State shall give immediate notification to the Division of Water and Waste Management's Emergency Notification Number, 1-800-642-3074. Such notification shall set forth insofar as possible and as soon thereafter as practical the time and place of such spill or discharge, type or types and quantity or quantities of the material or materials therein, action or actions taken to stop such spill or discharge and to minimize the polluting effect thereof, the measure or measures taken or to be taken in order to prevent a recurrence of any such spill or discharge and such additional information as may be requested by the Division of Water and Waste Management. This also applies to spills to the waters of the State resulting from accidents to common carriers by highway, rail and water.

It shall be the responsibility of each industrial establishment or other entity discharging directly to a stream to have available the following information pertaining to those substances that are employed or handled in its operation in sufficiently large amounts as to constitute a hazard in case of an accidental spill or discharge into a public stream:

- (1) Potential toxicity in water to man, animals and aquatic life;
- (2) Details on analytical procedures for the quantitative estimation of such substances in water and
- (3) Suggestions on safeguards or other precautionary measures to nullify the toxic effects of a substance once it has gotten into a stream.

Failure to furnish such information as required by Section 14, Article 11, Chapter 22, Code of West Virginia may be punishable under Section 24, Article 11, Chapter 22, and/or Section 22, Article 11, Chapter 22, Code of West Virginia.

It shall be the responsibility of any person who causes or contributes in any way to the spill or accidental discharge of any pollutant or pollutants into State waters to immediately take any and all measures necessary to contain such spill or discharge. It shall further be the responsibility of such person to take any and all measures necessary to clean-up, remove and otherwise render such spill or discharge harmless to the waters of the State.

When the Director determines it necessary for the effective containment and abatement of spills and accidental discharges, the Director may require the person or persons responsible for such spill or discharge to monitor affected waters in a manner prescribed by the Director until the possibility of any adverse effect on the waters of the State no longer exists.

VOLUNTARY REPORTING BY LAW OFFICERS, U. S. COAST GUARD, LOCK MASTERS AND OTHERS:

In cases involving river and highway accidents where the responsible party may or may not be available to report the incident, law officers, U. S. Coast Guard, Lock Masters and other interested person(s) should make the report.

WHO TO CONTACT:

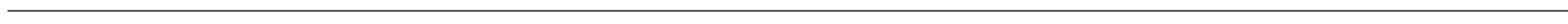
Notify the following number: **1-800-642-3074**

INFORMATION NEEDED:

- | | |
|--|---------------------------------------|
| - Source of spill or discharge | - Personnel at the scene |
| - Location of incident | - Actions initiated |
| - Time of incident | - Shipper/Manufacturer identification |
| - Material spilled or discharged | - Railcar/Truck identification number |
| - Amount spilled or discharged | - Container type |
| - Toxicity of material spilled or discharged | |

RIGHT OF APPEAL

Notice is hereby given of your right to appeal the terms and conditions of this permit which you are aggrieved by to the Environmental Quality Board by filing a NOTICE OF APPEAL on the form prescribed by such Board for this purpose, with the Board, in accordance with the provisions of Section 21, Article 11, Chapter 22 of the Code of West Virginia within thirty (30) days after the date of receipt of the above permit.



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

BASIS FOR LIMITATIONS – FINAL (REVISED 11/06/09)
Appalachian Oil Purchasers Inc.
WV00116408

Appalachian Oil Purchasers Inc. (AOP) proposes to produce “distilled” water and recover sodium chloride (salt as halite) from wastewater from several natural gas well drilling and development operations. The facility reported SIC 1389 (Oil and Gas Field Services, Not Elsewhere Classified) and SIC 2899 (Distilled Water / Salt Manufacturing) in the permit application. The facility reported that federal effluent guidelines in 40 CFR 415.160 applies and provided projected sodium chloride production rates. The permit application indicates that AOP will receive drilling and development wastewater and pre-treat the wastewater for metals and oils prior to storage in their “raw” water pond. The “raw” water is then used for production of “distilled” water for resale back to the natural gas well drilling companies or others in the case of surplus. During this process, sodium chloride (salt as halite) is produced which will be sold commercially.

The following federal guidelines exist for these SIC Codes and are applicable to process wastewater discharges at the facility:

40 CFR 437.10 (Subpart A – Centralized Waste Treatment, Metals Treatment and Recovery)
40 CFR 437.20 (Subpart B – Centralized Waste Treatment, Oils Treatment and Recovery)
40 CFR 415.160 (Subpart P – Inorganic Chemicals, Sodium Chloride)

The facility is considered a new source per 40 CFR 401.11(e) and must comply with New Source Performance Standards (NSPS) under the effluent guidelines. This facility is prohibited from discharging process waste water to navigable waters from the manufacturing of sodium chloride per 40 CFR 415.165. The facility is permitted to discharge process wastewater from Centralized Waste Treatment (CWT) operations per 40 CFR 437.10 and 437.20 from the recovery of metal and oily materials.

The permittee proposes to operate a centralized waste treatment system consisting of a filtration system for removal of solids and metals (for resale or landfill) and a gravity phase oil/water separator for recovery of oils (for resale). Next the wastewater goes through a carbon absorption pretreatment step and then a distillation (multi-effect evaporation) process. It is also further treated via carbon absorption and ultimately discharged through Outlet 001 to the Monongahela River near mile point 124.7. Outlet 001 is a non-routine discharge (planned once/year); therefore, technology based limitations must be imposed at Outlet 101 (outlet of oil/water separator) to ensure proper operation of the CWT treatment systems.

The permittee proposes to operate a “distilled” water manufacturing unit that produces as a byproduct sodium chloride. The distilled water is then recycled (sold to natural gas well drillers for well development). During normal operations, there is no discharge of wastewater from this operation.

Both the CWT process wastewater and the “distilled” water product are stored in the “clean” water pond. There is not a way to differentiate between the wastewaters subject to the different effluent guidelines which make it difficult to impose both effluent guideline requirements. The agency believes that the operations conducted at this facility are best characterized by the Centralized Waste Treatment Effluent Guideline under 40 CFR 437 Subparts A/B; therefore, these requirements have been imposed.

General Information

Sources of water: Natural Gas Well Drilling (process)

Discharge Location/Basin:

(Outlet 001 – CWT process wastewater, stormwater, other)
Monongahela River, Direct Drain near mile point 124.7
0.288 MGD total reported on application.

(Outlet 002 – Stormwater runoff)
Unnamed tributary of the Monongahela River
0.0298 MGD average reported on application

7Q10 of Monongahela River (001) – 340 cfs

The facility submitted 12 baseline monitoring sample results for all parameters expected to be present in the discharge near the proposed discharge point. This data was used as a basis for both Tier II anti-degradation review and background for approval of any applicable mixing zone.

Assumed pH and Temperature for WQBELs: 7.6 s.u. and 27 C

Assumed Hardness: 128 mg/l (average of upstream and downstream values at other NPDES facilities within 20 miles of proposed facility, WV0022047 and WV0023353)

The Monongahela River is 303D listed for Fecal Coliform and PCBs. Exceedences of water quality criteria for Total Dissolved Solids and Sulfate are occurring downstream of the proposed facility in Pennsylvania.

Antidegradation

A Tier 2 antidegradation review was conducted since this is a new discharge. Baseline water quality (BWQ) data was collected in the Monongahela River and submitted by the permittee for numerous parameters. The agency used this data to establish BWQ. This data was also used to establish background concentrations in the Monongahela River in order to grant a default mixing zone of 3 (zid) and 5 (cmz) for certain pollutants. WQBELs are imposed to prevent the discharge from increasing the levels in the Monongahela River more than 10% of the remaining assimilative capacity. Calculations are attached to the fact sheet.

Compliance evaluation

N/A—Proposed Facility

Outlet 101 (process and stormwater)

Flow -- Monitor (BPJ) - This discharge is batch wise, operating at 9,000 gallons per hour (approximately 1,000,000 gallons/year).

The CWT is operated as a treatment unit for metal recovery (40 CFR 437 Subpart A) then for oily material recovery (40 CFR 437 Subpart B) in series before being distilled. The agency is imposing only one internal compliance location at the outlet of the oil/water separator for both ELGs due to the series operation of the system and therefore the minimum of Subpart A and Subpart B ELGs for each parameter are imposed at Outlet 101 as prescribed by 40 CFR 437.14 and 437.21 (New Source Performance Standard). The imposed limitations at Outlet 101 are protective of both Subparts of the guidelines.

Total Suspended Solids -- 11.3 mg/l avg; 29.6 mg/l max (Technology Based)
Oil and Grease -- 38 mg/l avg; 127 mg/l max (Technology Based)
Total Cyanide -- 178 mg/l avg; 500 mg/l max (Technology Based)
Total Recoverable Arsenic -- 0.0199 mg/l avg; 0.0993 mg/l max (Technology Based)
Total Recoverable Titanium -- 0.00612 mg/l avg; 0.0159 mg/l max (Technology Based)
Total Recoverable Cobalt -- 0.0703 mg/l avg; 0.182 mg/l max (Technology Based)
Total Recoverable Nickel -- 0.309 mg/l avg; 0.794 mg/l max (Technology Based)
Total Recoverable Silver -- 0.0122 mg/l avg; 0.0318 mg/l max (Technology Based)
Total Recoverable Zinc -- 0.252 mg/l avg; 0.657 mg/l max (Technology Based)
Total Vanadium -- 0.0518 mg/l avg; 0.0628 mg/l max (Technology Based)
Total Tin -- 0.0367 mg/l avg; 0.0955 mg/l max (Technology Based)
Total Recoverable Cadmium -- 0.0102 mg/l avg; 0.0172 mg/l max (Technology Based)
Total Recoverable Lead -- 0.16 mg/l avg; 0.35 mg/l max (Technology Based)
Total Recoverable Chromium -- 0.0522 mg/l avg; 0.167 mg/l max (Technology Based)
Total Recoverable Copper -- 0.216 mg/l avg; 0.500 mg/l max (Technology Based)
Fluoranthene -- 0.0268 mg/l avg; 0.0537 mg/l max (Technology Based)
Bis (2-ethylhexyl) phthalate -- 0.101 mg/l avg; 0.205 mg/l max (Technology Based)
Total Mercury -- 0.000246 mg/l avg; 0.000641 mg/l max (Technology Based)
Total Butylbenzyl phthalate -- 0.0887 mg/l avg; 0.188 mg/l max (Technology Based)
Total Carbazole -- 0.276 mg/l avg; 0.598 mg/l max (Technology Based)
Total n-Decane -- 0.437 mg/l avg; 0.948 mg/l max (Technology Based)
Total n-Octadecane -- 0.302 mg/l avg; 0.589 mg/l max (Technology Based)
Total Recoverable Selenium -- 0.0698 mg/l avg; 0.176 mg/l max (Technology Based)
Total Recoverable Antimony -- 0.0312 mg/l avg; 0.111 mg/l max (Technology Based)
pH – 6 to 9 s.u.

Outlet 001 (process, stormwater, and other)

Flow -- 0.288 MGD (Tier II Anti-Degradation) - A Tier II anti-degradation review was performed at this maximum flow rate; therefore, to discharge at flows above this limit Tier II anti-degradation re-evaluation would be required.

Nitrate, Nitrogen -- Monitor (BPJ)
Total Recoverable Silver -- 0.006 mg/l avg; 0.013 mg/l max (WQS)
Total Recoverable Beryllium -- 0.000023 mg/l avg; 0.000034 mg/l max (WQS)
Total Barium -- 4.84 mg/l avg; 7.06 mg/l max (WQS)
Chlorides -- 912 mg/l avg; 1771 mg/l max (WQS)
Nitrite, Nitrogen -- 0.655 mg/l avg; 1.31 mg/l max (WQS)
Ammonia, Nitrogen -- 17.7 mg/l avg; 35.5 mg/l max (WQS)
Fluoride -- 6.27 mg/l avg; 9.15 mg/l max (WQS)
Total Recoverable Iron -- 4.61 mg/l avg; 8.21 mg/l max (WQS)
Total Recoverable Aluminum -- 0.782 mg/l avg; 1.57 mg/l max (WQS)
Chloroform -- 26 ug/l avg; 37.9 ug/l max (WQS)
Benzene -- 2.6 ug/l avg; 3.7 ug/l max (WQS)
Phthalate Esters -- 7 ug/l avg; 13.3 ug/l max (WQS)
Total Dissolved Solids -- 500 mg/l avg; 750 mg/l max (PA WQC)
Sulfate -- Report Only mg/l avg; 250 mg/l max (PA WQC)
Hexavalent Chromium -- 0.02 mg/l avg; 0.04 mg/l max (WQS)
Total Recoverable Selenium -- 0.013 mg/l avg; 0.026 mg/l max (WQS)
Total Recoverable Antimony -- 0.019 mg/l avg; 0.028 mg/l max (WQS)
Total Recoverable Arsenic -- 0.025 mg/l avg; 0.035 mg/l max (WQS)
Total Strontium -- 109 mg/l avg; 159 mg/l max (WQC, BPJ)
Total Recoverable Boron -- 35.8 mg/l avg; 52.7 mg/l max (WQC, BPJ)

Total Lithium -- 0.355 mg/l avg; 0.518 mg/l max (WQC, BPJ)
Alpha Radiation, Gross -- 7.5 pCi/l avg; 15 pCi/l max (WQS)
Beta Radiation, Gross -- 498 pCi/l avg; 1000 pCi/l max (WQS)
Radium 226+Radium 228, Total -- 2.5 pCi/l; 5 pCi/l max (WQS)
Strontium-90 -- 5 pCi/l avg; 10 pCi/l max (WQS)
Chronic Toxicity -- 4.1 TUc avg; 8.2 TUc max (WQS)
Dibromochloromethane – Monitor ug/l (BPJ)
Total Recoverable Cadmium – Monitor mg/l (BPJ)
Nitrated Hydrocarbons – Monitor ug/l (BPJ)

Nitrate, Nitrogen and silver indicate a reasonable potential to exceed water quality criteria end of pipe, but not water quality criteria at the edge of a default mixing zone (zid=3, cmz=5). Total halomethanes monitoring is imposed due to the elevated concentrations of chloride and bromide in the raw source water and elevated detection limits in the source data. Therefore monitoring to generate a database is proposed. A default mixing zone was granted for these parameters and limitations are imposed based on variation in the composition of the different well development wastewater that the permittee has proposed to accept as submitted with the permit applications.

Beryllium, barium, chlorides nitrite nitrogen, ammonia nitrogen, fluoride, iron, aluminum, chloroform, benzene, phthalate esters, antimony, selenium, and hexavalent chromium indicate a reasonable potential to exceed a numeric or narrative water quality criteria at end of pipe and with a default mixing zone (zid=3, cmz=5). A default mixing zone was granted for these parameters and limitations are imposed based on variation in the composition of the different well development wastewater that the permittee has proposed to accept as submitted with the permit applications. Limitations are imposed.

No information was submitted on Naturally Occurring Radioactive Materials (NORM) potentially present in the discharge. According to the permittee, the accepted wastewater is from Marcellus Shale geologic formations. Recent WVDEP data from drilling and development frac wastewater from natural gas drilling operations in this formation indicates that alpha, beta, radium 226, and radium 228 have a reasonable potential to be present above water quality criteria. Total strontium was present in the data submitted with the permit applications at levels significantly above background in the raw wastewater. Since no radionuclide data was submitted with the permit applications, limitations are imposed end of pipe.

West Virginia does not currently have any numeric water quality criteria prescribed for total strontium, boron, or lithium. However, the agency does have concerns with the toxicity of these parameters and their impact on the narrative water quality criteria found in 47 CSR 2, Section 3.2.e which prohibits discharges from discharging materials in concentrations which are harmful to or toxic to man, animal, or aquatic life. Therefore, the agency does possess a narrative water quality criterion which can be used for limiting specific pollutants where the State has no numeric criteria for those pollutants. In order to be protective-of-the-water-quality-criteria-of-the-Monongahela-River, the agency believes it is necessary to evaluate the necessity of water quality-based effluent limits for these parameters at Outlet 001 due to their presence in data submitted with the permit application. EPA Region III has recognized the risk based criteria (RBC) for tap water for strontium (22 mg/l); boron and borates (7.3 mg/l); and lithium (0.073 mg/l). Sufficient data exists to calculate a lowest acceptable chronic value (LCV) for fish (based on either the geometric mean of the Lowest Observed Effect Concentration and the No Observed Effect Concentration or an extrapolation from 96-hour LC50s using equations from Suter et al (1987) and Suter (1993) of 8.83 mg/l for boron and borates (RAIS, 2009). The agency therefore used the strontium, boron, and lithium values as a Category A (Human Health) criteria; and LVC for boron and borates as the B1,B4 (freshwater) chronic aquatic water quality criterion to evaluate if there was reasonable potential to cause or contribute to a violation of the State's narrative water quality criteria. The permittee submitted background data for strontium, boron, and lithium with the permit application and these parameters indicate a reasonable potential to exceed narrative water quality criteria with default mixing (zid=3, cmz=5). A default mixing zone was granted for these parameters and limitations are imposed based on

variation in the composition of the different well development wastewater that the permittee has proposed to accept as submitted with the permit application. Limitations are imposed.

Pennsylvania is experiencing problems with total dissolved solids and sulfates in the Monongahela River. Levels in the Monongahela River have recently risen above the downstream water quality criteria for these parameters. Therefore, in accordance with 47 CSR 2 Section 6.1.c and 47 CSR 10 Section 6.3.d, water quality based effluent limitations are imposed in accordance with Pennsylvania's water quality criteria. No mixing zone was granted due to background levels exceeding Pennsylvania's water quality criteria in the river.

The dissolved oxygen sag in the Monongahela River based on the proposed discharge was evaluated. The proposed discharge will not exceed 0.3 mg/l oxygen sag and therefore minimum dissolved oxygen limits are not required.

Outlet 002 (storm water)

Flow -- Monitor MGD (BPJ) This flow is a stormwater discharge, therefore, it is variable.

Monitoring parameters include pollutants detected in raw water samples from well drilling development wastewater accepted by the facility to generate a database for comparison with stormwater benchmarks upon collection of 4 samples.

Outlet 201 (natural gas well development wastewater)

The permittee shall monitor the concentrations in the source wastewater from all well fields for the parameters listed. Additional treatment shall be performed if the concentrations exceed the local limits listed in Section C.19.b.1.

Other Requirements

Bench/pilot scale test data submitted with the permit application indicate the permittee potentially cannot meet WQBELs for benzene (Oxford17FB and ECAFB), beryllium (U-DELLPW), selenium (Oxford16PW and Wilfong-SandersPW), chlorides (Oxford16PW and Wilfong-SandersPW), phthalate esters (Oxford17FB, ECAFB, and U-DELLPW) and TDS (Oxford16PW and Wilfong-SandersPW) at Outlet 001 with once through treatment. The permittee; however, has built in the ability to use double distillation (recycle treated wastewater back to the raw water pond at least once) techniques in order to achieve the final effluent limitations at Outlet 001. In addition, the permittee will be required to treat with carbon absorption prior to the final discharge at all times.

Influent monitoring is prescribed at Internal Outlets 201 for the pollutants that based on calculated removals potentially cannot meet final effluent limitations at Outlet 001 and Section C.19 identifies acceptable influent levels for these pollutants for once-through distillation and double distillation in order to ensure effluent limitations at Outlet 001 are achieved.

TENORM is regulated by the Nuclear Regulatory Commission (NRC) and/or the West Virginia Department of Human Health (WVDHH) per 64 CSR 23. This regulation requires facilities that accept TENORM be certified by either WVDHH or the NRC prior to acceptance.

Nitrated hydrocarbons (as nitro aromatics) monitoring is required due to the presence of 4-nitroquinoline-1-oxide (4-NQO) in a study released by New York State Energy Research and Development Authority (NYSERDA, 9/2009). All summarized sample results (24 total) from Marcellus Shale sites in Pennsylvania and West Virginia indicated the presence of 4-NQO in elevated concentrations. The facility has proposed accepting production and well development wastewater from Marcellus Shale natural gas

drilling sites in West Virginia and Pennsylvania for subsequent treatment and disposal. 4-NQO is a potential toxic pollutant (mutagen/carcinogen) potentially generated from the nitrification of polynuclear aromatic hydrocarbons or as a derivative of quinoline which may be present in hydraulic fracturing additives at some drilling sites according to the NYSERDA report. No data exists on its treatability by the methods proposed by the facility (GAC and distillation). In addition, No EPA approved analytical method in 40 CFR 136 exists for this parameter; therefore, the permittee shall use the EPA method with the lower achievable method detection limit of 8091 or 8270C based on commercially available laboratories for 4-NQO and associated nitrated hydrocarbons identified in Section C.29. Monitoring is imposed at Outlet 001 and 201 to generate a database.

WATER QUALITY BASED EFFLUENT LIMITATIONS

v 9.0

AOP Clearwater

Outlet: 001

Stream: Monongahela River

Hardness (mg/l):	128	Effluent Flow (MGD):	0.288
Temperature (°C):	27	Instream Waste %:	0.13
pH:	7.6	ZID:	1.0
Stream 1Q10 (CFS):	NA	CMZ:	1.0
Stream 7Q10 (CFS):	340	HHA 1/2 Mile Rule CMZ:	1.0

PARAMETER	Baseline Water Quality (mg/l)	Stream Background (mg/l)	End of Pipe WQC RP	Effluent Limit RP	Average Monthly Limit (mg/l)	Maximum Daily Limit (mg/l)	Maximum Tier Protection Level
Radiation, Alpha	NA	NA	No Data	No Data	7.5	15.0	Tier 1
Radiation, Beta	NA	NA	No Data	No Data	498	1000	Tier 1
Radium 226+228	NA	NA	No Data	No Data	2.5	5.0	Tier 1
Strontium-90	NA	NA	No Data	No Data	5.0	10.0	Tier 1

Outfall discharges to Ohio River and subject to ORSANCO Pollution Control Standards:	No
Outfall discharges to a Trout Stream:	No
Outfall discharges to a stream exempt from Human Health A Criteria:	No
Outfall discharges to a stream exempt from all Human Health Criteria:	No
Outfall discharges within 1/2 mile upstream of a public drinking water intake:	No
Outfall has limitations for at least one metal using a site specific translator:	No
Outfall has Tier 2.0 antidegradation limitations for at least one pollutant:	No

WATER QUALITY BASED EFFLUENT LIMITATIONS

AOP Clearwater

v 9.45

Outlet: 001

Stream: Monongahela River

Hardness (mg/l):	128	Instream Waste %:	0.13
Temperature (°C):	27	ZID:	3.0
pH:	7.3	CMZ:	5.0
Stream 1Q10 (CFS):	NA	HH CMZ:	5.0
Stream 7Q10 (CFS):	340	HHA 1/2 Mile Rule CMZ:	5.0
Effluent Flow (MGD):	0.288		

PARAMETER	Stream Background (mg/l)	End of Pipe WQC RP	RWC WQC RP	Ave Mon (mg/l)	Max Daily (mg/l)
Arsenic	0.0065	Yes	Yes	0.024	0.035
Silver	0.0024	Yes	Yes	0.006	0.013

Outfall discharges to Ohio River and is subject to ORSANCO Pollution Control Standards:	No
Outfall discharges to a Trout Stream:	No
Outfall discharges to a stream exempt from Human Health A Criteria:	No
Outfall discharges to a stream exempt from all Human Health Criteria:	No
Outfall discharges within 1/2 mile upstream of a public drinking water intake:	No
Outfall has limitations for at least one metal using a site specific translator:	No